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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,412	10/12/2001	Creighton C. Kelly	5319	9945

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EXAMINER
TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/976,412	KELLY ET AL.	
	Examiner	Art Unit	
	Norca L. Torres-Velazquez	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Appeal Brief filed on February 20, 2004, PROSECUTION IS HEREBY REOPENED. Prosecution is reopened since the secondary reference of Meitner et al. applied by the Examiner fails to teach the patterned (discontinuous) bonding in a border area of the cloth material. The reference teaches bonding the complete surface of the cloth. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Response to Arguments

2. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

a. Applicants argue that the Paley reference teaches away from the use of a discontinuous fused zone and refer to Col. 3, lines 29-33 in which the reference includes a formula requiring that the continuous fused border to a specific distance that will avoid segments severed during cutting to be released to the ambient.

The Examiner does not agree with Applicants interpretation of the Paley reference, while Paley teaches the use a continuous fused zone to seal any severed segments or fibers since just localized melting of the border at cutting is insufficient to prevent the segments from release during manipulation. It is noted that the localized melting is not the same as a discontinuous fused border as Applicants imply in their arguments. The localized melting is produced by cutting the wipe by a hot knife or a hot wire and fuses just the edges of the wipe instead of fusing further inside of the edge forming a border.

b. It is noted that Applicants argue that Applicant's field of endeavor is woven or knitted wiping cloths. (Page 4 of Brief)

The Examiner notes that claim 20 of the present invention claims that the clean room is constructed at least partly of a textile fabric and that the textile fabric is selected from the group consisting of knit fabric, woven fabric and nonwoven fabric. Therefore, it is the Examiner's position that Applicant's invention is just limited to woven or knitted wiping cloths.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3, 8-10, 15-17 and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over PALEY et al. (US 4,888,229) in view of ROCKWELL, Jr. (US 6,001,442).

PALEY et al. discloses a wiper for reducing particulate contamination, which otherwise might result from the use of the wiper in controlled environment, such as that maintained in a clean room, the wiper being of the type constructed at least partially from a thermoplastic fabric material. The wiper provides a fused border in the material along the peripheral edges of the wiper and extends inwardly into the wiper. (Abstract)

The reference discloses the use of materials such as polyester in the form of a knitted, woven or non-woven fabric. (Column 2, lines 50-57)

While PALEY et al. teaches a plurality of fused perimeter edges, it teaches a continuous fused border zone. It fails to teach the claimed discontinuous fused border zone with discrete fusion points formed by localized melt fusion.

ROCKWELL, Jr. discloses a roll tower made from cotton/polyester or polyester material and teaches the use of an ultrasonically bonded, boundary edge 12 disposed on the sides of the textile surface 14. The ultrasonically bonded, boundary edges 12 preferably have a discontinuous brick-like pattern. Such a discontinuous brick-like pattern is believed to provide exceptional flexibility. (Column 2, lines 9-24; Figure 1)

Since both PALEY et al. and ROCKWELL, Jr. are directed to the same field of endeavor, the purpose disclosed by ROCKWELL, Jr. would have been recognized in the pertinent art of PALEY et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the wiper and provide it with discontinuous boundary edge (that is equated to the discontinuous fused zone of the present invention), with the motivation of

providing the wiper of PALEY et al. with exceptional flexibility as disclosed by ROCKWELL, Jr. above.

5. Claims 4, 18 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over PALEY et al. and ROCKWELL, Jr. in view of MORIN et al. (US 6,189,189).

PALEY et al. and ROCKWELL, Jr. fail to teach heat setting the textile fabric at a temperature of from 180 to 300 degrees Fahrenheit.

MORIN et al. discloses a method of manufacturing a polyester textile fabric having a relatively low level of particulate contaminated and high absorbency is provided by heat setting the fabric at a temperature of 300°F or less. (Abstract)

The reference teaches a method of manufacturing a textile fabric for use in a clean room having the steps of constructing a knitted or woven fabric from polyester yarn, heat setting the fabric at a temperature of from 180° to 300° F, and cutting the fabric to form the desired article; wherein the polyester fiber has not been heated above the temperature of 300°F. (Column 2, lines 10-14)

The reference also teaches that the wipers of their invention may be constructed from woven or knitted polyester fibers, preferably fibers of poly (ethylene terephthalate). It is also preferable to construct the fabrics from continuous filament, polyester yarn. Examples of useful yarns are those having a denier to filament ratio of from 0.1 to 10, a denier of 15 to 250 with filament counts ranging from 10 to 250. Typically, the fabrics used for clean room wipers have a weight of 1 to 9 ounces per square yard. (Column 2, lines 54-61) Further, the reference teaches that the geometric shape of the clean room wiper can be squared or any shape may be employed. (Column 3, lines 53-57)

The MORIN et al. reference further teaches that the primary tests for contamination associated with clean room wipers are those measuring particles, unspecified extractable matter, and individual ionic constituents. The amount of extractable contamination associated with a clean room wiper is determined by extracting the wiper and the organic and inorganic non-volatile residue may be further analyzed. (Column 4, lines 44-65) The reference further discloses that by following the process of their invention it is possible to reduce non-volatile residues to less than 0.005 grams/meters^2, and even less than 0.003 grams/meters^2 as measured by short-term extraction. (Column 7, lines 5-8)

Since MORIN et al. teaches the importance of having reduced non-volatile residues in a clean room wiper and also teaches the use of polyester yarns, it is reasonable to presume that MORIN et al.'s invention would provide polyester that is substantially free of inorganic ionic additives in order to provide a wiper with reduced non-volatile residues. (As disclosed above)

Since PALEY et al. and MORIN et al. are from the same field of endeavor, clean room wipers; the purpose disclosed by MORIN et al. would have been recognized in the pertinent art of PALEY et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the clean room wiper and provide it with a method of heat setting the fabric at a temperature of 300°F or less with the motivation of providing it with dimensional stability and to provide a polyester fabric with low particulate since it is believed that by heating the polyester above 300°F causes low molecular weight polymers or bloomers to blossom to the surface of the polyester fibers, where they crystallize into small particles as disclosed by MORIN et al. (Column 2, lines 16-20 and Column 3, line 28).

6. Claims 5-9 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over PALEY et al. ROCKWELL, Jr. and MORIN et al. as applied to claim 4 above, and further in view of DEAN et al. (US 6,139,954).

The prior art cited on paragraph 3 of this Office Action fails to teach the use of polyester free of inorganic additives.

DEAN et al. teaches fiber made from polyesters used as binder fibers for nonwovens, textile and industrial yarns and fabrics. The polyester taught by DEAN et al. does not contain any antimony catalytic materials (Claim 11) and it teaches that these polymers are clear and non-opaque. (Column 3, lines 14-20).

Since it is known from the prior art that polyester is usually manufactured using metallic catalysts, usually compounds of antimony or aluminum, in finite amounts. And that also delusterants such as titanium dioxide are often applied to alter the appearance of the completed product. DEAN et al.'s polyester will equate to the claimed polyester with substantially free ionic additives.

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the cleanroom wiper and provide it with a polyester that does not contain any antimony catalytic materials and that is clear and non-opaque with the motivation of avoiding having particles shed from polyester wipers that contain these metallic contaminants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Norca L. Torres-Velazquez
Examiner
Art Unit 1771

April 26, 2004

TERREL MORRIS
SUPERVISORY PATENT EXAMINER
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